

DERWENT-ACC-NO: 1988-048189
DERWENT-WEEK: 198807
COPYRIGHT 1999 DERWENT INFORMATION LTD

TITLE: Prepn. of collagen coating for ophthalmic use - involves using pig's eye sclera to obtain collagen soln. which is then dialysed and dried

INVENTOR: AMSTISLAVS, T S; BAGROV, S N ; FEDOROV, S N

PATENT-ASSIGNEE: MOSC EYE MICROSURG[MOEYR]

PRIORITY-DATA: 1985SU-3915990 (June 19, 1985)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES
MAIN-IPC			
SU 1321420 A	July 7, 1987	N/A	003 N/A

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
SU 1321420A	N/A	1985SU-3915990
1985		June 19,

INT-CL_(IPC): A61K037/12

ABSTRACTED-PUB-NO: SU 1321420A

BASIC-ABSTRACT: The retina, the conjunctiva residues, muscle and other parts are carefully removed from the sclerotica of the pig's eye, and the stroma is sepd. and cut into small pieces. A specimen of tissue is washed with distd. water until mechanical impurities and blood are removed completely.

Then it is transferred to a flask into which is poured a 10% soln. of NaOH in a satd. soln. of Na₂SO₄. After 48 hrs. at 18-20 deg.

C. the soln. is removed and the tissue is neutralised to pH 6.0-7.0 by mixing with a 2% soln. of boric acid neutralised to pH 6.0-7.0 by mixing with a 2% soln. of boric acid and repeatedly changing the soln. The tissue is then washed with distd. water until sulphate ions are completely removed from the washing soln. and then treated with a 1M soln. of CH₃COOH to give a final concn. of protein in the soln. of 1%. After mixing, the compsn. is left in a refrigerator for 1-3 days at 4 deg. C. It is then homogenised, centrifuged for 30 mins. at 2000 r.p.m. and left for a day at 4 deg. C. The obtd. soln. is filtered through a glass filter using a water pump. The obtd. 1% soln. of collagen is dild. with 0.5M CH₃COOH until protein concn. is 0.7-0.8% and dialysed against 0.2M phosphate or citrate buffer at 18-20 deg. C. to pH 4.5-7.5. Dialysis is continued while reducing buffer concn. from 0.2 to 0.002M in 3-4 stages and heating to 28-30 deg. C. in the final stage. The obtd. collagen soln. is then centrifuged for 15 mins. at 1000 r.p.m., poured onto a pattern having contours corresp. to the anterior section of the eye, dried in a dust free dessicator for 48 hrs. at 10-20 deg. C, and sterilised by gamma radiation at a dose rate 0.5M rad/h. and dose 0.5 Mrad/h..

$$(\approx 5 \text{ kGy/h})$$

USE/ADVANTAGE - In
ophthalmology for keratotomy and keratoplast. The coating produces
less
inflammation when used, and has high transparency. Bul.25/7.7.87.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS:
PREPARATION COLLAGEN COATING OPHTHALMIC PIG EYE
SCLERA OBTAIN COLLAGEN SOLUTION
DIALYSE DRY

DERWENT-CLASS: B04

CPI-CODES: B04-B04A6; B12-L04;

CHEMICAL-CODES:
Chemical Indexing M1 *01*
Fragmentation Code
M423 M720 M903 N161 N425 N511 N512 P922 V752

UNLINKED-DERWENT-REGISTRY-NUMBERS: 0247S; 1514S ;
1744S ; 1894S

SECONDARY-ACC-NO:
CPI Secondary Accession Numbers: C1988-021655